

I.C.C. Docket No. 03-0731  
Staff Ex. 3.0

*Revised*

DIRECT TESTIMONY

OF

ROBERT F. KOCH

RATES DEPARTMENT

TELECOMMUNICATIONS DIVISION

ILLINOIS COMMERCE COMMISSION

HARRISONVILLE TELEPHONE COMPANY

Petition For Suspension Or Modification Of Section

251(b)(2) Requirements Of The Federal

Telecommunications Act Pursuant To Section

251(f)(2) Of Said Act, For Entry Of Interim Order; And

For Other Necessary Relief

DOCKET NO. 03-0731

FEBRUARY 6, 2004

OFFICIAL FILE

I.C.C. DOCKET NO. 03-0731

*FCC Staff* 3.0 *Revised*

Witness

Date *2/23/04* Recorder *CB*

1 **I. Introduction and Overview**  
2

3 **Q. Please state your name and business address.**  
4

5 A. My name is Robert F. Koch and my business address is 527 East Capitol  
6 Avenue, Springfield, Illinois 62701.  
7

8 **Q. By whom are you employed and in what capacity?**  
9

10 A. I am employed by the Illinois Commerce Commission ("Commission") as  
11 an Economic Analyst in the Rates Section of the Telecommunications  
12 Division.  
13

14 **Q. Please describe your educational and occupational background.**  
15

16 A. I received a Bachelor of Science degree in Mathematics and Economics  
17 from Illinois State University in 1992. In May of 1997 I received a Master  
18 of Science degree in Economics from Illinois State University. During the  
19 Summer of 1996, I worked as an intern in the Telecommunications Rates  
20 Section of the Public Utilities Division with the Commission. Upon  
21 graduation, I accepted a position with the Commission as an Economic  
22 Analyst in the Rates Section of the Telecommunications Division.  
23

24 **Q. Please briefly describe your duties with the Illinois Commerce**  
25 **Commission.**  
26

27 A. My responsibilities include reviewing wholesale and retail tariff filings of  
28 both competitive and non-competitive telecommunications services,  
29 providing support to other Commission Staff, and analyzing cost study  
30 issues in docketed cases that have cost of service and rate implications. I  
31 am also responsible for reviewing the managerial, technical, and financial  
32 capabilities of companies seeking approval to do business in Illinois as  
33 competitive local exchange carriers.  
34

35 **Q Have you previously testified before the Commission?**  
36

37 A. Yes. I have provided expert witness testimony in several docketed cases:  
38 I.C.C. Docket No. 96-0503 (GTE wholesale rate docket); I.C.C. Docket  
39 Nos. 97-0601/0602/0516 (Consol.)(access charge reform, etc.); I.C.C.  
40 Docket No. 97-0633 (interim local number portability cost recovery); I.C.C.  
41 Docket No. 98-0200/0537 (complaint investigating GTE Usage Sensitive  
42 Service rates); I.C.C. Docket No. 98-0252/0335 (Consol.) (Ameritech 5  
43 year alternative regulation review); I.C.C. Docket No. 98-0860 (Ameritech  
44 competitive service reclassification); I.C.C. Docket Nos. 99-0038/0039  
45 (Consol.) (access charge refunds for IXC's); I.C.C. Docket No. 99-0185  
46 (Ameritech alternative regulation Annual Filing); I.C.C. Docket No. 99-

00315 (infrastructure maintenance fee adjustments); I.C.C. Docket No. 99-0412 (Geneseo EAS petition); I.C.C. Docket No. 99-0544 (ATS Services certification case); I.C.C. Docket No. 00-0043 (Cub complaint of Ameritech usage plans); I.C.C. Docket No. 00-0187 (GTE sale of assets to Citizens Telecommunications Company of Illinois); I.C.C. Docket No. 00-0023 (complaint investigating Ameritech's termination penalties); I.C.C. Docket No. 00-0233/0335 (Consol.) (Phase I and Phase II); I.C.C. Docket No. 00-0393 (initial and rehearing investigation of Ameritech's line sharing tariff), I.C.C. Docket No. 00-0812 (Phase I of Verizon cost docket), I.C.C. Docket No. 01-0662 (Phase I of Ameritech Section 271 checklist compliance docket), I.C.C. Docket No. 02-0247 (Phase I of investigation into Ameritech access charges), and I.C.C. Docket No. 02-0864 (SBC UNE rate investigation).

**Q. What is the purpose of your Direct Testimony in this proceeding?**

**A.** The purpose of my testimony is to address the cost information submitted by Harrisonville Telephone Company ("Harrisonville") as part of its petition to this Commission under Section 251(f)(2) of Federal Telecommunications Act of 1996 ("the Act").<sup>1</sup> Harrisonville's Petition asks this Commission to suspend the Federal Communications Commission's ("FCC") mandate under Section 251(b)(2) of the Act that Harrisonville

69 implement wireline to wireless local number portability ("LNP") in its  
70 service territory. See 47 U.S.C. § 251(f)(2); 47 U.S.C. § 251(b)(2).

71

72 **Q. Just so we are clear, what does Section 251(f)(2) provide for?**

73

74 **A.** Although I am not a lawyer, it is my understanding that Section 251(f)(2) of  
75 the Act permits this Commission, upon petition, to suspend or modify the  
76 application of the obligations imposed on rural local telecommunications  
77 carriers<sup>2</sup> under Section 251(b) or (c) of the Act if the Commission  
78 determines that such suspension or modification:

79 (A) is necessary—

80 (i) to avoid a significant adverse economic impact on users  
81 of telecommunications services generally;

82 (ii) to avoid imposing a requirement that is unduly  
83 economically burdensome; or

84 (iii) to avoid imposing a requirement that is technically  
85 infeasible; and

86 (B) is consistent with the public interest, convenience, and  
87 necessity.

88

89 47 U.S.C. § 251(f)(2).

90

91 **Q. In light of Section 251(f)(2) and Harrisonville's Petition and Direct**  
92 **Testimony then what does your testimony specifically address?**

93

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<sup>1</sup> Petition of Harrisonville Telephone Company for Suspension or Modification of the Applicability of the Requirements of Section 251(b) of the federal Telecommunications Act of 1996, 47 U.S.C. § 251(b)(2), pursuant to Section 251(f)(2), Docket No. 03-0731 (filed Nov. 24, 2003) ("Petition").

<sup>2</sup> Section 251(f)(2) defines a rural carrier as "a local exchange carrier with fewer than 2 percent of the Nation's subscriber line installed in the aggregate nationwide[.]" 47 U.S.C. § 251(f)(2).

94 A. Specifically, my testimony addresses the propriety of Harrisonville's claim  
95 that implementation of LNP in its service territory would impose a  
96 significant adverse economic impact upon itself and its end-users.<sup>3</sup>  
97 Although the company did not calculate the per month charge it would be  
98 forced to assess on end-user customers, the company provide cost  
99 estimates based on two possible scenarios in Harrisonville Exhibit 1.3.  
100 Based on this information, I have calculated that the cost per end-user, as  
101 purported by the company, would be between \$0.42 (scenario 2) and  
102 \$0.87 (scenario 1) per month over a five year period.<sup>4</sup> I should note that  
103 while Harrisonville's expert, Lee Whitcher, does not propose the above  
104 rates or other cost components to formulate a *specific* end-user rate, he  
105 indicates that the entirety of the costs developed in his cost study would  
106 need to be recovered in some fashion. I address Harrisonville's cost  
107 claims based on my understanding that the ability of Harrisonville and  
108 other incumbent carriers to recover their LNP implementation costs falls  
109 entirely under the purview of the FCC.<sup>5</sup> In short, I provide an opinion as to  
110 the propriety of certain cost items introduced by Mr. Whitcher, and offer an  
111 alternative estimate of the potential impact on customers based on the  
112 limited information available at this time. The opinion I offer regarding cost

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<sup>3</sup> Direct Testimony of Lee Whitcher, On behalf of Harrisonville Telephone Company, Docket No. 03-0733, filed January 9, 2004, at 19 and 20 ("Harrisonville Direct Testimony").

<sup>4</sup> See Staff Exhibit 3.0, Schedule 3.3.

<sup>5</sup> See *In the Matter of Telephone Number Portability, Memorandum Opinion and Order on Reconsideration and order on Application for Review*, CC Docket No. 95-116, FCC 02-16, ¶ 12 (rel. Feb 14, 2002) ("2002 Reconsideration Order") (stating that the FCC has "exclusive jurisdiction over the distribution and recovery of both intrastate and interstate costs of implementing long-term number portability.").

113 issues for LNP is an estimate of the LNP costs Harrisonville may be able  
114 to recover from its customers through an FCC-authorized end user  
115 charge.

116

117 **II. Cost Recovery Issues**

118

119 **Q. What is your understanding of the role of the Commission in the**  
120 **review of LNP cost recovery?**

121

122 **A.** It is my understanding that the Commission has had no role in determining  
123 the appropriate rates for LNP cost recovery to date. To my knowledge, all  
124 cost recovery for LNP associated costs is obtained via incumbent local  
125 exchange carrier tariffs filed with the FCC pursuant to that agency's rules  
126 and orders.<sup>6</sup>

127

128 **Q. Please describe your understanding of the federal rules regarding**  
129 **allowable cost recovery for LNP.**

130

131 **A.** The rules for recovery of carrier-specific costs directly related to providing  
132 number portability are contained in Section 52.33 of the FCC's rules. 47

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<sup>6</sup> See 47 C.F.R. §§ 52.32 (describing the recovery and allocation of shared costs of LNP implementation); 52.33 (describing the recovery of carrier specific LNP implementation costs through end user and query charges); *In the Matter of Telephone Number Portability, Third Report and Order*, CC Docket, No. 95-116, 13 FCC Rcd 11701, 11776, ¶¶ 142, 147 (rel. May 12, 1998) ("Third Report and Order") (allowing, but not requiring, ILECs to recover their carrier

133 C.F.R. § 52.33. These rules specify that LNP query charges may be  
134 recovered via a charge to carriers and that a monthly charge may be  
135 assessed on end-users.<sup>7</sup> These rules also specify that the monthly charge  
136 may take effect no earlier than February 1, 1999 and may end no later  
137 than 5 years after the charge goes into effect.<sup>8</sup>

138

139 **Q. Are you familiar with tariffs filed with the FCC for LNP cost recovery?**

140

141 **A.** Yes. I am aware that SBC Illinois has recovered its LNP costs via rates  
142 contained in its federal tariff, FCC #2. The rate for the LNP end-user  
143 surcharge established in that tariff is \$0.28 and has been in effect since  
144 February 1, 1999. I am also aware that SBC Illinois has filed to remove  
145 the rate for this service from its tariffs, effective January 31, 2004 in FCC  
146 Transmittal 1380. I have not reviewed the cost development for this rate.

147

148 I am also aware of the NECA Tariff F.C.C. No. 5, 482<sup>nd</sup> Revised Page 1,  
149 which adds Telephone Service Company to the list of companies applying  
150 LNP end-user rates and LNP query services. The rate for the basic LNP  
151 end-user charge established in this filing is \$0.25 and the LNP query  
152 charge is \$0.002. I have reviewed a summary of cost information that was  
153 provided as part of this tariff filing.

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specific costs directly related to LNP provisioning through federally tariffed end-user and query charges).

<sup>7</sup> Id.

<sup>8</sup> Id.



154

155 **Q. Please describe the types of LNP that carriers are required to**  
156 **provide.**

157

158 A. Until recently, the LNP requirement consisted primarily of local exchange  
159 carriers ("LECs") having to provide local number portability to other  
160 requesting LECs. This type of LNP arrangement can be referred to as  
161 wireline to wireline LNP. On November 10, 2003, the FCC clarified its  
162 earlier orders and determined that LECs must also provide LNP to  
163 wireless carriers, effective November 24, 2003.<sup>9</sup>

164

165 **Q. Did the Wireline to Wireless Order address cost recovery?**

166

167 A. To the best of my understanding, the Wireline to Wireless Order does not  
168 address any cost recovery issues directly. The order does acknowledge  
169 that there are outstanding issues regarding the recovery of the costs  
170 associated with routing calls between wireline and wireless carriers, but  
171 concludes that these issues are outside the scope of the proceeding.<sup>10</sup>  
172 Further, the order indicates that calls to ported numbers will not be rated  
173 differently than calls to non-portable numbers.<sup>11</sup> As such, it can be inferred

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<sup>9</sup> *In the Matter of Telephone Number Portability, CTIA Petitions of Declaratory Ruling on Wireline to Wireless Porting Issues, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 95-116, ¶¶ 29-30 (rel. Nov. 10, 2003) ("Wireline to Wireless LNP Order").

<sup>10</sup> *Id.* at ¶¶ 39 and 40.

<sup>11</sup> *Id.* at ¶ 28.

174 that the order prohibits the wireline carrier from recovering the incremental  
175 cost of routing calls to numbers ported to wireless carriers from its own  
176 customers via per minute of use charges.

177

178 **Q. Did the Wireline to Wireless Order address the issue of the economic**  
179 **burden on either end-user customers or porting carriers?**

180

181 **A.** To my knowledge, the order does not address any economic burden  
182 issues.

183

184 **Q. What circumstances would warrant the concern of the Commission**  
185 **with regard to the burden on end-user customers and Harrisonville in**  
186 **this proceeding?**

187

188 **A.** There are two cost-related circumstances that are of concern. First,  
189 Harrisonville does not currently provide wireline to wireline LNP. Because  
190 of this fact, Harrisonville would need to recover all LNP related costs for  
191 the sole purpose of providing wireline to wireless LNP. This is in contrast  
192 to carriers that already have LNP capabilities, whose incremental cost of  
193 extending the capability to wireless carriers is minimal at best.

194

195 Second, the issue of cost recovery for transit and transport has not yet  
196 been resolved. Because of its current routing arrangements, all calls from

197 Harrisonville's local exchange customers to numbers that have been  
198 ported (from Harrisonville to wireless carriers) would incur routing and  
199 transport costs. Without a recovery mechanism in place, it cannot be  
200 determined, as of this date, how these costs will impact Harrisonville or its  
201 end-users. As Harrisonville witness Whitcher testifies, these costs may  
202 not be trivial.<sup>12</sup>  
203

204 **Q. Have you reviewed the cost information provided by Harrisonville?**  
205

206 **A.** Yes. In general, I agree with the format of the cost development as put  
207 forth in Harrisonville Telephone Company Exhibit 1.3. It appears to be  
208 consistent with the format for LNP end-user charges in NECA Tariff F.C.C.  
209 No. 5. However, I am concerned with some of the items included in  
210 Exhibit 1.3. As an alternative, I have prepared Schedule 3.1 to my Direct  
211 Testimony for the development of the cost per subscriber per month. The  
212 remainder of this testimony addresses my concerns and the proposed  
213 changes to the cost per subscriber. In no way does this schedule  
214 represent an endorsement as to what the appropriate end-user charge  
215 should be if Harrisonville were to provide LNP. Rather, it is my attempt to  
216 provide a more reasonable cost per customer for the purpose of aiding the  
217 Commission's decision regarding this petition.  
218

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<sup>12</sup> Harrisonville Direct Testimony, Exhibit 1.3.

219 **Q. What is your opinion regarding the LNP query cost being included in**  
220 **the cost per subscriber?**

221

222 A. The FCC allows for the recovery of LNP query costs via a per query  
223 charge to carriers.<sup>13</sup> As such, it does not represent a cost that must be  
224 borne by end user customers.<sup>14</sup> I agree with Mr. Whitcher that such costs  
225 occur and must be recovered, but do not believe it is appropriate to  
226 characterize these costs as an economic burden on the end-user. As  
227 such, I have removed all of the costs for this item in Schedule 3.1.

228

229 **Q. What is your opinion regarding the inclusion of legal fees in the cost**  
230 **per subscriber?**

231

232 A. From my review of the support for this item, it does not appear that all of  
233 these costs are direct costs of provisioning service. I accept the ongoing  
234 administrative costs listed in Harrisonville Exhibit 1.3, as they appear to be  
235 necessary costs associated directly with the provisioning of wireline to  
236 wireless LNP. I do not accept, however, the inclusion of \$20,000 in  
237 regulatory and legal fees that are listed as start-up costs. These costs  
238 appear to be discretionary in nature and borne by the management of the

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<sup>13</sup> See 47 C.F.R. § 52.33; 2002 *Reconsideration Order*, at ¶ 6 ("[In the Third Order and Report] we concluded that it is competitively neutral for carriers to bear their own carrier specific costs directly related to providing number portability, and we allowed the incumbent LECs to recover these costs through: (1) a monthly number portability end-user charge; and (2) a number portability query-service charged that applies to carriers whose behalf the incumbent LEC performs queries.").

239 company to provide it with information and advice for the purpose of  
240 protecting the interests of the company. I do not oppose the recovery of  
241 such costs, but don't believe these are costs that should be recovered  
242 directly from end-users via an LNP surcharge. As such, Schedule 3.1  
243 deducts \$20,000 in start-up costs from the calculation of costs per  
244 subscriber per month.

245

246 **Q. What is your opinion regarding cost recovery for employee**  
247 **education?**

248

249 **A.** It is my opinion that these costs are inflated. A review of the material  
250 provided by the company indicates that three employees would engage in  
251 several weeks of training. Although I cannot attest to whether all of the  
252 reported training is necessary, it is my belief that at such a significant cost  
253 (\$8,965), it would be imprudent to send more than one technical employee  
254 to receive the training. I have thus deducted \$17,965 in start-up costs  
255 from the calculation in Schedule 3.1 to reflect that only one employee  
256 would be receiving the training.

257

258 **Q. Do you have additional concerns?**

259

---

<sup>14</sup> Id.

260 A. Yes. First, as was indicated previously in this testimony, I am not entirely  
261 certain why three weeks of training is needed for technical employees. At  
262 this time I cannot positively assert that all of the training per employee is  
263 necessary for the provisioning of LNP. Second, I am not certain as to  
264 whether the costs put forth by Harrisonville for LNP software reflect the  
265 true incremental cost of adding this capability in the switch. I am  
266 concerned that the cost of this capability may include cost of other  
267 switching functionality as well. I am exploring both of these issues further  
268 via the submission of data requests to Harrisonville, and may seek to  
269 revise my calculation of cost per subscriber at a later date based on the  
270 response received.

271

272 Q. What is the overall impact of your recommendations?

273

274 A. By modifying the cost analysis provided by Harrisonville, the cost per  
275 subscriber per month decreases from ~~\$0.42~~ <sup>\$0.57</sup> to ~~\$0.33~~ <sup>\$0.82</sup> in scenario 1 and  
276 from ~~\$0.37~~ <sup>\$0.42</sup> to ~~\$0.62~~ <sup>\$0.38</sup> in scenario 2, as shown in Schedule 3.1 of my Direct  
277 Testimony. I must reiterate that this figure is by no means a  
278 recommended rate for an LNP surcharge for Harrisonville, but rather is a  
279 more appropriate figure for which to gauge the impact on the end-user.  
280 Schedule 3.2 of my Direct Testimony calculates the percentage mark-up  
281 over basic telephony rates of the \$0.82 per month LNP cost for

282 Harrisonville in scenario <sup>1</sup> 15. For the purpose of this analysis, the basic  
283 telephony rate is comprised of the network access line and subscriber line  
284 charge ("SLC"). The results of these calculations are summarized in the  
285 table below. Staff witness Jeffrey H. Hoagg discusses the  
286 appropriateness of placing such a burden on customers in his direct  
287 testimony, Staff Exhibit 1.0.

	<u>Mark-Up</u>
Area 1A Single Line Business	3.99%
Residential	5.96%
Multi Line Business	3.53%
Area 1B Single Line Business	4.30%
Residential	6.07%
Multi Line Business	3.76%
Area 2 Single Line Business	3.99%
Residential	5.96%
Multi Line Business	3.53%
Area 3 Single Line Business	3.99%
Residential	5.96%
Multi Line Business	3.53%

288  
289 **Q. For the purpose of comparison, do you have rate information for any**  
290 **carriers that have implemented LNP capabilities in the State of**  
291 **Illinois?**

292  
293 **A. Yes. SBC Illinois has charged its end-users \$0.28 per line per month for**  
294 **recovery of costs associated with LNP cost recovery since 1999. The**

<sup>15</sup> I do not perform this analysis for scenario <sup>1</sup> 1, as it is my opinion that the cost and demand assumptions made in scenario <sup>2</sup> 2 are more consistent with the assumptions made by other carriers requesting similar relief before the Commission.

295 table below shows the percentage mark-up for basic residential, single  
296 and multi line business customers.

297

	<u>Line Rate</u>	<u>SLC</u>	<u>Revenue</u>	<u>LNP Cost</u>	<u>Mark-Up</u>
Single Line Business	\$ 11.87	\$ 4.50	\$ 16.37	\$ 0.28	1.71%
Residential	\$ 9.00	\$ 4.50	\$ 13.50	\$ 0.28	2.07%
Multi Line Business	\$ 11.87	\$ 4.50	\$ 16.37	\$ 0.28	1.71%

298

299 **Q. Does this conclude your testimony?**

300

301 **A. Yes.**



*Revised*

**LNP Costs for Harrisonville Telephone Company  
Scenario 1**

	<u>Start-Up</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Reported Cost	\$251,895	\$187,841	\$96,806	\$104,278	\$115,750	\$127,222	
Adjustments:							
Query		\$1,338	\$1,561	\$1,784	\$2,007	\$2,230	
Legal Fees	\$20,000						
Employee Education	\$17,965						
Total Adjustments	<u>\$37,965</u>	<u>\$1,338</u>	<u>\$1,561</u>	<u>\$1,784</u>	<u>\$2,007</u>	<u>\$2,230</u>	
Adjusted Cost	\$213,930	\$186,503	\$95,245	\$102,494	\$113,743	\$124,992	
Demand		19,241	19,036	18,831	18,627	18,422	
PV Factors	100.0000%	89.8876%	80.7978%	72.6272%	65.2829%	58.6812%	
PV Cost	\$213,930	\$ 167,643	\$ 76,956	\$ 74,439	\$ 74,255	\$ 73,347	\$680,569
PV Demand		17,295	15,381	13,676	12,160	10,810	69,323
Cost/Subscriber/Month							<div>\$ 9.82</div> <div><u>\$ 0.82</u></div>

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*ICC Staff* 3.0  
Schedule 3.1 Revised

Witness

Date *2/23/04* Reporter *CB*

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**Scenario 2**

	<u>Start-Up</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>year 5</u>	<u>Total</u>
Reported Cost	\$251,895	\$26,387	\$30,123	\$33,859	\$37,595	\$41,331	
Adjustments:							
Query		\$111	\$223	\$334	\$446	\$557	
Legal Fees	\$20,000						
Employee Education	\$17,965						
Total Adjustments	<u>\$37,965</u>	<u>\$111</u>	<u>\$223</u>	<u>\$334</u>	<u>\$446</u>	<u>\$557</u>	
Adjusted Cost	\$213,930	\$26,276	\$29,900	\$33,525	\$37,149	\$40,774	
Demand		20,367	20,264	20,162	20,060	19,957	
PV Factors	100.0000%	89.8876%	80.7978%	72.6272%	65.2829%	58.6812%	
PV Cost	\$213,930	\$ 23,619	\$ 24,159	\$ 24,348	\$ 24,252	\$ 23,927	\$334,234
PV Demand		18,307	16,373	14,643	13,096	11,711	74,130
Cost/Subscriber/Month							<u>\$ 4.51</u> <u>\$ 0.38</u>

		<u>Line Rate</u>	<u>SLC</u>	<u>Revenue</u>	<u>LNP Cost</u>	<u>Mark-Up</u>
Area 1A	Single Line Business	\$ 14.05	\$6.50	\$ 20.55	\$ 0.82	3.99%
	Residential	\$ 7.26	\$6.50	\$ 13.76	\$ 0.82	5.96%
	Multi Line Business	\$ 14.05	\$9.20	\$ 23.25	\$ 0.82	3.53%
Area 1B	Single Line Business	\$ 12.59	\$6.50	\$ 19.09	\$ 0.82	4.30%
	Residential	\$ 7.02	\$6.50	\$ 13.52	\$ 0.82	6.07%
	Multi Line Business	\$ 12.59	\$9.20	\$ 21.79	\$ 0.82	3.76%
Area 2	Single Line Business	\$ 14.05	\$6.50	\$ 20.55	\$ 0.82	3.99%
	Residential	\$ 7.26	\$6.50	\$ 13.76	\$ 0.82	5.96%
	Multi Line Business	\$ 14.05	\$9.20	\$ 23.25	\$ 0.82	3.53%
Area 3	Single Line Business	\$ 14.05	\$6.50	\$ 20.55	\$ 0.82	3.99%
	Residential	\$ 7.26	\$6.50	\$ 13.76	\$ 0.82	5.96%
	Multi Line Business	\$ 14.05	\$9.20	\$ 23.25	\$ 0.82	3.53%

**LNP Costs for Harrisonville Telephone Company  
Scenario 1**

	<u>Start-Up</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Reported Cost	\$251,895	\$187,841	\$96,806	\$104,278	\$115,750	\$127,222	
Demand		19,241	19,036	18,831	18,627	18,422	
PV Factors	100.0000%	89.8876%	80.7978%	72.6272%	65.2829%	58.6812%	
PV Cost	\$251,895	\$168,846	\$78,217	\$75,734	\$75,565	\$74,655	\$724,912
PV Demand		17,295	15,381	13,676	12,160	10,810	69,323
							\$ 10.46
Cost/Subscriber/Month							<u>\$ 0.87</u>

**Scenario 2**

	<u>Start-Up</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>year 5</u>	<u>Total</u>
Reported Cost	\$251,895	\$26,387	\$30,123	\$33,859	\$37,595	\$41,331	
Demand		20,367	20,264	20,162	20,060	19,957	
PV Factors	100.0000%	89.8876%	80.7978%	72.6272%	65.2829%	58.6812%	
PV Cost	\$251,895	\$23,719	\$24,339	\$24,591	\$24,543	\$24,254	\$373,340
PV Demand		18,307	16,373	14,643	13,096	11,711	74,130
							\$ 5.04
Cost/Subscriber/Month							<u>\$ 0.42</u>